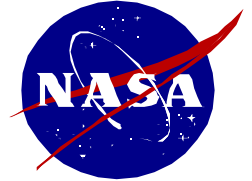


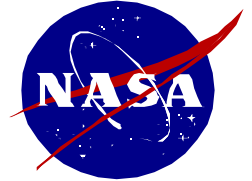
# ***THE INTERNET***

- ***A “network of networks” that are tied together so that users of any network can use the network services provided by TCP/IP to reach users of any other network.***
- ***Provides electronic mail, remote login and file transfer services.***
- ***Currently connects over 100 countries around the world and links over 2 million computers.***
- ***There is no single entity that is in charge of the Internet.***



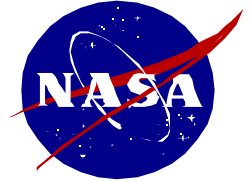
## ***THE INTERNET*** (cont'd)

- ***Provides access to a variety of scientific facilities including: digital libraries, unique databases, supercomputers, and remote scientific sensing instruments.***
- ***Promotes researcher interaction and collaboration with a single, well-integrated connection to end users using TCP/IP.***



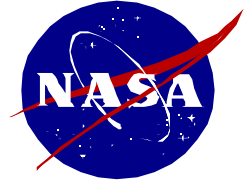
## ***History of the Internet***

- *Began in the early 1970's by the Pentagon as a way for military researchers to communicate across the ARPANET, the forerunner of the Internet*
- *In 1982, specifications were developed for TCP/IP, an "Internet Protocol" or language that became the basis for the Internet.*
- *Because the specifications were public, commercial vendors could develop networking products that conformed to the spec.*
- *The Internet Activities Board (IAB) was created in 1983 to guide the evolution of the TCP/IP Protocol Suite and to provide research advice to the Internet community.*
- *In 1983 the name server was developed at U of Wisconsin, allowing the use of names instead of addresses for internet connections.*
- *Also in 1983, Berkeley released 4.2BSD of the Unix operating system, incorporating TCP/IP*
- *In the 1986, the National Science Foundation established a national backbone service to provide access to regional networks. It was upgraded in 1989 to 1.54 Mbps, and in 1991 to 45 Mbps*
- *In 1992, the World Wide Web was released by CERN in Switzerland.*



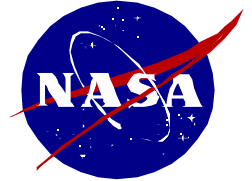
## ***History of the Internet (Cont'd)***

- *After its release, the World Wide Web experienced explosive growth and other forms of Internet access, such as gopher, began to fade.*
- *February, 1996. Communications Decency Act enacted into law, heavily regulating the internet. A federal judge blocked enforcement of the act.*
- *February 15th, 1996. President Clinton announces his “Technology Literacy Challenge”, stating that “by the year 2000 every classroom and every library in the entire United States is hooked up to the Information Superhighway”*



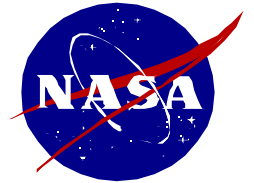
## ***Growth of the Internet***

- ***1981 - 213 users***
- ***1989 - 80,000 users***
- ***1990 - 313,000 users***
- ***1992 - 727,000 users***
- ***1993 - 1,313,000 (estimated)***
- ***1994 - 2,217,000 (estimated)***
- ***1995 - 6.6 million users***
- ***2000 - 180 million users (estimated)***



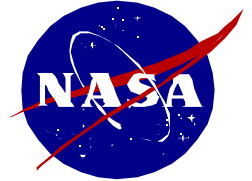
## ***INTERNET ADDRESSES***

- ***Made up of various parts similar to a U.S. Postal address.***
- ***Have two forms, one which is numeric (this is known as the IP address) and another which is mnemonic.***
  - ***128.183.15.054 is the MU-SPIN file server's IP address***
  - ***muspin.gsfc.nasa.gov is the mnemonic address***



## ***INTERNET RESOURCES***

- ***Discussion Lists***
- ***On-line databases***
- ***Public Domain Software***
- ***Usenet***



## ***DISCUSSION LISTS***

### ***How to find:***

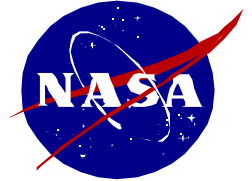
- ***To: [listserv@dartcms1.dartmouth.edu](mailto:listserv@dartcms1.dartmouth.edu)***  
***Subject: [BLANK]***  
***Text: send listtext package***

### ***To Subscribe to a Discussion send e-mail***

- ***To: <discussion group e-mail address>***  
***Subject: [BLANK]***  
***Text: SUBSCRIBE <group-name> <your real name>***

### ***To Cancel your Subscription***

- ***Text: UNSUBSCRIBE <group-name> <your real name>***



## ***PUBLIC DOMAIN SOFTWARE***

- ***University of Michigan software archives:  
public domain Mac, IBM PC, Apple II, NeXt  
software.***

*ftp archive.umich.edu*

*For archive info, send e-mail to:*

*archive-request@archive.umich.edu*

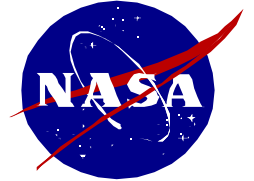
- ***Macintosh public domain archive at  
Stanford University.***

*ftp sumex-aim.stanford.edu*

*cd info-mac*

*For help, send e-mail to*

*info-mac-request@sumex.aim.stanford.edu*



## ON-LINE DATABASES

### ■ **National Science Foundation Information Service**

*telnet stis.nsf.gov*

*login as public*

*terminal type of vt100nkp*

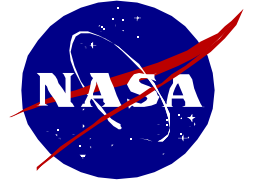
### ■ **NETFIND**

*telnet bruno.cs.colorado.edu*

*login as netfind*

### ■ **Geographic Name Server**

*telnet martini.eecs.umich.edu 3000*

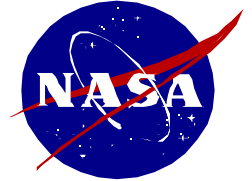


## ***USENET NEWS***

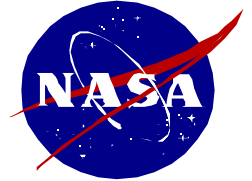
- ***Usenet news is a world-wide distributed discussion system.***
- ***It consists of a set of newsgroups with names that are classified by subject.***
- ***Its available on a variety of computer systems and networks, but the bulk of traffic is transported over either the Internet or UUCP.***



## ***THINGS TO REMEMBER WHEN USING USENET***

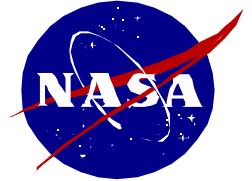


- ***Don't forget the person on the other side is human.***
- ***Can't blame system administrators for users' behavior.***
- ***Be careful what you say about others.***
- ***Always be brief.***
- ***Your postings reflect upon you, be proud of them.***
- ***Use descriptive information in your subject line.***
- ***Think about your audience!***
- ***Limit your line length and don't use control characters.***



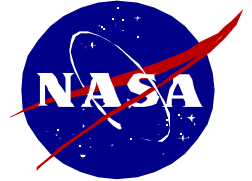
## ***ELECTRONIC MAIL***

- ***Also known as e-mail***
- ***Used to:***
  - ***send and receive messages***
  - ***participate in discussions***
  - ***request and receive information***
- ***The best way to find someone's e-mail address is to ASK THE PERSON!!!***



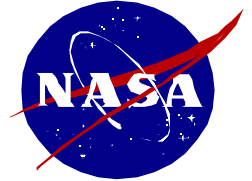
## ***FORM OF ELECTRONIC MAIL***

- ***An e-mail address has the form  
user@destination.***
- ***An example address is  
user@localnode.gsfc.nasa.gov***
  - *user*            *users login id*
  - *@*            *separates the username from the  
node address*
  - *localnode*   *the name of the computer*
  - *gsfc*           *the organization unit (Goddard  
Space Flight Center)*
  - *nasa*           *the organization (National  
Aeronautics Space Administration)*
  - *gov*           *Internet domain (gov for  
government agency)*



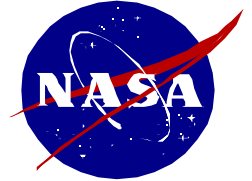
# ***FILE TRANSFER PROTOCOL***

- ***Also known as FTP.***
- ***The Internet standard protocol for transferring files.***
- ***Used for transferring files over the network.***



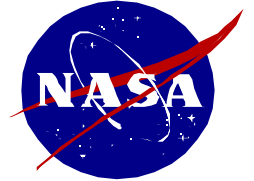
## ***ANONYMOUS FTP SITES***

- ***Very popular.***
- ***Set up to provide files for public access and retrieval.***
  - ***Free software***
  - ***Electronic books***
  - ***Documentation***
  - ***Maps***
  - ***Graphics***
  - ***High-tech images***
  - ***Sound***



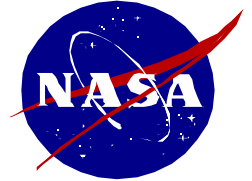
## ***TELNET***

- ***Allows you to access public resources on a computer at another site.***
- ***Uses resources on a larger computer.***
- ***Connects to bulletin boards, campus-wide information systems, libraries, supercomputers, databases, and other resources worldwide.***



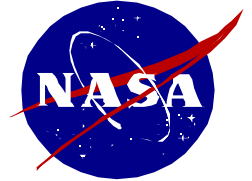
# **GOPHER**

- *Distributed document search and retrieval.*
- *Browsing a hierarchical collection of menus.*
- *Recipes, campus-wide information, sound, pictures, weather, etc.*
- *It lets you browse through the Internet's resources without having to remember names, addresses, commands, etc.*



## **Web Browsers**

- *Networked information discovery, retrieval, and collaboration using GUI (graphical interface with point and click using a mouse)*
- *Provides a hypertext interface to the global Internet.*
- *Client communications with HyperText Transfer Protocol (HTTP ) servers. It also communicates with FTP, Gopher, WAIS, NNTP (Usenet News).*
- *Documents viewed are written in HyperText Markup Language (HTML).*
- *Features unlimited multimedia capabilities (Graphics, sound, movies, etc).*



# **BROWSER CAPABILITIES**

## **■ Some of the features include:**

- *display of plain text, rich text, and hypermedia,*
- *inline graphics,*
- *a customizable graphical user interface,*
- *global history of information space navigation -- tracking where you've been.*
- *quick access to important or frequently used documents via a personal "hotlist",*
- *search capabilities within a document,*
- *text and voice annotation for documents anywhere on the Internet,*
- *search capabilities within a document,*
- *text and voice annotation for documents anywhere on the Internet,*
- *full TCP/ICP-based communications support,*
- *easily extendible to arbitrary viewers or other data formats.*